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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,801	11/14/2005	Brian T. McNamara	60429-239; OT-5146	1788

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EXAMINER	
KRUER, STEFAN	

ART UNIT	PAPER NUMBER
3654	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/556,801	MCNAMARA ET AL.	
	Examiner	Art Unit	
	Stefan Kruer	3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 10 and 12 - 23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 10 and 12 - 23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 November 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show the details of the steel-core, rubber coated tension member of specified dimensions as described in the specification on Page 4, L. 8 and recited in Claim 6.

Furthermore, the disclosure states that the inventive belt is "…. significantly different than a rope or chain used in "conventional compensating arrangements"; however, said belt is not properly depicted.

Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim recites a tension member comprising a plurality of belts wherein each belt has a diameter of approximately 10 mm and a width of approximately 30 mm as well as the possibility of having multiple belts of unspecified dimensions (as derived from "In one example…", Specification, Page 4, L. 8). Furthermore, the disclosure states that the inventive belt is "…. significantly different than a rope or chain used in "conventional compensating arrangements"; however, said belt is not properly depicted.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 7 - 9 and 18 - 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuller et al (5,750,945) in view of Miyoshi et al (GB 2,270,292).

Re: Claim 1, Fuller et al disclose:

- a cab (13, Fig. 1);
- a counterweight (32);
- a load bearing member (14) extending between the cab and the counterweight so that the cab and counterweight move simultaneously;
- a tension member (16) extending between the cab and the counterweight, the tension member providing a desired tension on the load bearing member;
- a termination (36, Fig. 2), the termination including an elastic element (52) that dampens an initial tendency of the cab or the counterweight to continue moving even though the other of the cab or the counterweight has stopped; and
- a damper (56) supported for movement with one of the cab or the counterweight, one end of the tension member being associated with the damper such that the damper reduces motion of the cab or the counterweight when the other of the cab or the counterweight has stopped after a bias of the elastic element is overcome and the elastic element is at least partially compressed; however,

Fuller et al disclose their termination associated with an end of the load bearing member.

Attention is directed to Myoshi et al who teach their termination (4, Fig. 8) associated with an end of their load bearing member (3) as well as their tension member (11) to afford vibration damping of both the load bearing and tension members in anticipation of mechanically generated vibrations as known in the art (Page 2, L. 15).

It would have been obvious to one of ordinary skill in the art to modify the reference of Fuller et al with the teaching of Myoshi et al for driving control (Line 27).

Re: Claim 7, Fuller et al disclose wherein the damper comprises at least one of an air spring, a pneumatic damper, a hydraulic damper or a mechanical spring.

Re: Claim 8, Fuller et al disclose a first member (40, Fig. 3) acting against one side of the damper and a second member (46) associated with an opposite side of the damper, the first member remaining stationary relative to the cab or counterweight with which the damper moves, the second member being moveable relative to the first member, the damper resisting movement of the second member toward the first member.

With respect to the embodiment of Fuller et al in view of the teaching of Myoshi et al, said first and second members would be designated interchangeably, e.g., first member (46, Fig. 3) acting against one side of the damper and a second member (40) associated with an opposite side of the damper.

Re: Claim 9, Fuller et al disclose wherein their *load bearing* member is secured to at least one termination (49, Fig. 3) that is secured near one end of each of a plurality of thimble rods (note threaded portions, each secured by a nut), an opposite end of the thimble rods being positioned on an opposite side of the second member from the damper and wherein the elastic element comprises a spring associated with each opposite end of each thimble rods to urge the opposite ends away from the second member.

However, Fuller et al are silent with respect to a termination associated with their *tension member*.

Attention is directed to Myoshi et al who teach their termination (4, Fig. 8) associated with an end of their load bearing member (3) as well as their tension member (11) to afford vibration damping of both the load bearing and tension members in anticipation of mechanically generated vibrations as known in the art (Page 2, L. 15).

It would have been obvious to one of ordinary skill in the art to modify the reference of Fuller et al with the teaching of Myoshi et al for driving control (Line 27).

Re: Claim 18, Fuller et al disclose an assembly (Fig. 1) for providing tension on a load bearing member in an elevator system, comprising:

- an elongate tension member having a first end that is adapted to be secured to one of a cab or a counterweight;
- a termination, the termination including an elastic element that dampens an initial tendency of the cab or the counterweight to continue moving even though the other of the cab or the counterweight has stopped; and
- a damper that is adapted to be supported for movement with the other of the cab or the counterweight, a second end of the load bearing member being associated with the damper such that the damper absorbs a load on the laod bearing member under selected conditions after a bias of the elastic element is overcome and the elastic element is at least partially compressed;
- a base module (not depicted, understood to house 20, Fig. 1) that is adapted to be secured in a pit (not depicted, understood) and that includes at least one sheave (20) having an axis of rotation that remains stationary relative to the pit, the tension member at least partially wrapping around the sheave.

However, Fuller et al are silent with respect to a termination associated with their *tension member*.

Attention is directed to Myoshi et al who teach their termination (4, Fig. 8) associated with an end of their load bearing member (3) as well as their tension member (11) to afford vibration damping of both the load bearing and tension members

in anticipation of mechanically generated vibrations as in part generated by their base module and as known in the art (Page 2, L. 22).

It would have been obvious to one of ordinary skill in the art to modify the reference of Fuller et al with the teaching of Myoshi et al for driving control (Line 27).

Re: Claim 19, Fuller et al disclose wherein the damper includes at least one of an air spring, a hydraulic actuator, a pneumatic actuator or a mechanical spring.

Claims 2, 10, and 12 - 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuller et al in view of Miyoshi et al, as applied to Claim 1 with respect to Claim 2, and in further view of Ach (2001/0025743).

Fuller et al disclose a stationary base (not depicted, but understood, e.g. to support compensating sheave (20)) supported beneath a lowest available position of their cab; however, Fuller et al are silent with respect to a plurality of tension members and a plurality of sheaves rotatably supported on their base.

Miyoshi et al teach a stationary base (not depicted, but understood, e.g. to support compensating sheave (12)) supported beneath a lowest available position of the cab and a plurality of sheaves (12, in keeping with alternative plurality of load bearing members and dampers, Pg. 4, L. 3) rotatably supported on the base; however, Miyoshi et al disclose each tension member moving along a sheave as the cab and counterweight move.

Attention is directed to Ach who teaches his stationary base (12) supported beneath a lowest available position of his cab (1) and a plurality of sheaves (6) rotatably supported on the base, his tension member (4) moving along the sheaves as the cab and counterweight move, for the features of affording desired displacement of the tension member in accommodating the elevator arrangement (L) for parallel runs of the tension member between the stationary base and respective counterweight and elevator car, larger standardized sheaves and a tension member of larger diameter.

It would have been obvious to one of ordinary skill in the art to modify the reference of Fuller et al and Miyoshi et al with the teachings of Ach for utility.

Claims 3 – 6 and 15 - 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuller et al, Miyoshi et al and Ach, as applied to Claim 2, and in further view of Baranda et al (6,401,871).

Re: Claim 3, Fuller et al, Miyoshi et al and Ach are silent with respect to a material of their sheaves.

Attention is directed to Baranda et al who teach their sheaves as optionally fabricated from plastic (Col. 6, L. 10), wherein the use of plastic promotes the service life of their tension member (Col. 5, L. 9), as an inexpensive alternative to the use and inevitable replacement of sheave liners.

It would have been obvious to one of ordinary skill in the art to modify the reference of Fuller et al, Miyoshi et al and Ach with the teachings of Baranda et al for enhanced service life and reduction in operating costs.

Re: Claims 4 - 5, Fuller et al and Miyoshi et al are silent with respect to a diameter of their sheaves with respect to that of their tension members.

Ach reviews the diameters of his sheaves as being "... of equal size whose sum is greater than the trailing rope separation..." as well as the teaching of the "... smaller the diameter of the tensioning pulley, the higher the number of revolutions per unit of distance traveled by the elevator car ... which causes disturbing noise from the bearings (not shown) providing the rotatable mounting (of his stationary base). At the same time, it is only possible to use tension members (sic) of small diameter and in large numbers; however, Ach is silent with respect to a ratio of his sheave diameter to that of his tension member(s).

Attention is directed to Baranda et al who teach standard sheaves as having diameters of 320 mm and the ability to reduce the sheave diameter and thereby the ratio of sheave diameter to outer diameter of their tension member through the use of synthetic tension members (Col. 1, L. 66 - Col. 2, L. 14), whereby the width of their tension member is much greater than its diameter for a reduction of bending pressure applied to their tension member (Col. 7, L. 18 – 23). Furthermore, Baranda et al review an example(s) of their inventive belt as having core ropes of unique material and

diameter encased in a protective, sheave-engaging coating (Col. 5, L. 30 - 39) as well as interdependency of their sheave diameter, belt diameter and space with respect to a anticipated load (Col. 5, L. 29); thereby yielding a sheave having a diameter approximately thirty times greater than that of an outside diameter of a tension member.

It would have been obvious to one of ordinary skill in the art to modify the reference of Fuller et al and Miyoshi et al with the teachings of Ach and Baranda et al for enhanced service life and reductions in noise and torque, for ergonomics and costs.

Re: Claim 6, Fuller et al are silent with respect to a plurality of tension members and Miyoshi et al and Ach disclose a plurality of tension members; however, Miyoshi et al and Ach are silent with respect to their respective thickness and width.

Attention is directed to Baranda et al who their tension member comprising a plurality of belts (Fig. 3) wherein each of said belts has a width much greater than its diameter, "...particularly of (sic) (aspect) (sic) ratios greater than two" (Col. 4, L. 59).

It would have been obvious to one of ordinary skill in the art to modify the reference of Fuller et al, Miyoshi et al and Ach with the teachings of Baranda et al for enhanced distribution of rope pressure and thereby service life, without comprising "load carrying capacity", for savings in operating costs.

Re: Claims 15 – 17, Fuller et al and Miyoshi et al are silent with respect to the diameters of their sheaves and Ach teaches the diameters of his sheaves being of large diameter and thereby of standard size for noise reduction; however, Ach is silent with respect to a diameter of their sheaves with respect to the diameter of their tension member.

Attention is directed to Baranda et al who teach standard sheaves as having diameters of 320 mm and the ability to reduce the sheave diameter and thereby the ratio of sheave diameter to outer diameter of their tension member through the use of synthetic tension members, whereby the width of their tension member is much greater than its diameter for a reduction of bending pressure applied to their tension member. Furthermore, Baranda et al review an example(s) of their inventive belt as having core ropes of unique material and diameter encased in a protective, sheave-engaging

coating as well as interdependency of their sheave diameter, belt diameter and space with respect to an anticipated load, thereby yielding a sheave having a diameter approximately thirty times greater than that of an outside diameter of a tension member.

Additionally, Baranda et al teaches their tension member comprising a plurality of belts wherein each of said belts has a width much greater than its diameter, "...particularly of (sic) (aspect) (sic) ratios greater than two" (Col. 4, L. 59).

It would have been obvious to one of ordinary skill in the art to modify the reference Fuller et al, Miyoshi et al and Ach with the teachings of Baranda et al for enhanced distribution of rope pressure and thereby service life, without comprising "load carrying capacity".

Claims 20 - 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyoshi et al in view of Baranda et al.

Re: Claim 20, Miyoshi et al disclose:

- a cab (6, Fig. 8);
- a counterweight (13);
- a load bearing member (3) extending between the cab and the counterweight so that the cab and counterweight move simultaneously;
- a tension member (11) extending between the cab and the counterweight, the tension member providing a desired tension on the load bearing member, said tension member comprising a plurality of tension members; and
- a damper (5b) supported for movement with one of the cab or the counterweight, one end of the tension member being associated with the damper such that the damper reduces motion of the cab or the counterweight when the other of the cab or the counterweight has stopped; however,

Miyoshi et al are silent with respect to their tension member comprising a belt.

Attention is directed to Baranda et al who their tension member comprising a plurality of belts (Fig. 3) wherein each of said belts has a width much greater than its diameter, "...particularly of (sic) (aspect) (sic) ratios greater than two" (Col. 4, L. 59) as

well as that their belts have a thickness of *approximately* 10 mm and a width of *approximately* 30 mm (Col. 7, L. 39 – 45, based on the amount and diameters of the internal ropes), for enhanced flexibility, smaller sheave diameters generating significant reductions in torque (drive capacity) and reduction in rope pressure.

It would have been obvious to one of ordinary skill in the art to modify the reference of Fuller et al, Miyoshi et al and Ach with the teachings of Baranda et al for savings in capital- and operating costs.

Furthermore, it would have been an obvious to one of ordinary skill in the art, as a matter of optimization and experimentation, to provide the belts having a thickness of *approximately* 10 mm and a width of *approximately* 30 mm in as much as the criticality of these dimensions has not been disclosed yet such constructions have been anticipated by the prior art of record as reviewed above.

Re: Claim 21, Miyoshi et al disclose a stationary base (not depicted, but understood, e.g. to support compensating sheave (12)) supported beneath a lowest available position of the cab and a plurality of sheaves (12, in keeping with alternative plurality of load bearing members and dampers, Pg. 4, L. 3) rotatably supported on the base, the tension member(s) moving along a sheave(s) as the cab and counterweight move.

Re: Claims 22 - 23, Miyoshi et al are silent with respect to the diameters of their sheaves.

Attention is directed to Baranda et al who teach standard sheaves as having diameters of 320 mm and the ability to reduce the sheave diameter and thereby the ratio of sheave diameter to outer diameter of their tension member through the use of synthetic tension members, whereby the width of their tension member is much greater than its diameter for a reduction of bending pressure applied to their tension member. Furthermore, Baranda et al review an example(s) of their inventive belt as having core ropes of unique material and diameter encased in a protective, sheave-engaging coating as well as interdependency of their sheave diameter, belt diameter and space

with respect to an anticipated load, thereby yielding a sheave having a diameter approximately thirty times greater than that of an outside diameter of a tension member.

Additionally, Baranda et al teaches their tension member comprising a plurality of belts wherein each of said belts has a width much greater than its diameter, "...particularly of (sic) (aspect) (sic) ratios greater than two" (Col. 4, L. 59).

It would have been obvious to one of ordinary skill in the art to modify the reference of Miyoshi et al with the teachings of Baranda et al for performance and savings in operating costs.

Response to Arguments

Applicant's arguments filed 19 March 2008 have been fully considered but they are not persuasive.

The rejections of the previous office action were in response to the claim language.

With respect to the load bearing member of Baranda et al not teaching the tension member of the instant invention for purpose of its construction and use, the load carrying member of Baranda et al reviews the features and performance of belts as broadly referenced by the instant invention, as understood, thereby teaching their applicability in modifying the reference of Myoshi et al accordingly.

With respect to the objection to the drawings, the MPEP states under §608.02(d): *Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing.*

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Kruer whose telephone number is 571.272.5913. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Cuomo can be reached on 571.272.6856. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217.9197 (toll-free).

/Stefan Kruer/
Examiner, Art Unit 3654
3 June 2008
/Peter M. Cuomo/
Supervisory Patent Examiner, Art Unit 3654